

WHAT IS CLAIMED IS:

1. A Kelvin connector for coupling to a post of a battery, comprising:

a first contact having a surface which at least partially conforms to and is adapted to engage and electrically connect to a surface of the post;

a second contact having a surface which at least partially conforms to and is adapted to engage and electrically connect to the surface of the post; and

an electrical insulator between the first contact and the second contact to urge the surface of the first contact and the surface of the second contact against the surface of the post and thereby form a Kelvin connection to the post.

2. The apparatus of claim 1 wherein the first contact, the second contact and the insulator form a loop around the battery post.

3. The apparatus of claim 1 wherein the first contact and the second contact oppose each other.

4. The apparatus of claim 1 wherein the first contact comprises:

an insulator support portion which is embedded within the electrical insulator; and

a post grasping portion on which the surface of the first contact resides.

5. The apparatus of claim 4 wherein the insulator support portion includes a plurality of grooves through which the insulator passes, thereby providing additional support for the insulator.

6. The apparatus of claim 4 wherein the post grasping portion includes a plurality of teeth.

7. The apparatus of claim 6 wherein the teeth are disposed substantially in a common plane.

8. The apparatus of claim 6 where the teeth extend in non-planar directions.

9. The apparatus of claim 1 further comprising a first connection bar coupled to the first electrical contact and a second connection bar coupled to the second electrical contact.

10. The apparatus of claim 1 wherein the first electrical contact and the second electrical contact are formed from electrically conductive sheet metal.

11. The apparatus of claim 1 wherein the first electrical contact and the second electrical contact are copper pieces with solder plating.

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12. The apparatus of claim 1 wherein the insulator comprises plastic.
13. The apparatus of claim 1 wherein the insulator comprises a composite material.
14. A battery tester employing the Kelvin connector of claim 1.
15. The apparatus of claim 14 wherein the battery tester is mounted to a housing of a storage battery.
16. A method of forming an Kelvin connector for engaging a battery post, the method comprising:
- (a) providing an electrically conductive piece sized to engage the battery post, the electrically conductive piece having a first electrical contact with a first end and a second end and a second electrical contact with a first end and a second end, wherein a first shorting bar couples the first end of the first contact to the first end of the second contact and a second shorting bar couples the second end of the first contact to the second end of the second contact;
  - (b) forming a first mechanical link between the first end of the first contact and the

first end of the second contact and a second mechanical link between the second end of the first contact and the second end of the second contact with an insulator; and

- (c) removing the first shorting bar and the second shorting to electrically isolate the first contact from the second contact, such that the first contact and the second contact remain mechanically linked and electrically isolated by the insulator.

17. The method of claim 16 wherein the electrically conductive piece is formed from electrically conductive sheet metal.

18. The method of claim 16 wherein the electrically conductive piece is formed from copper which is solder plated.

19. The method of claim 16 wherein the insulator comprises plastic.

20. The method of claim 16 wherein the insulator comprises a composite material.